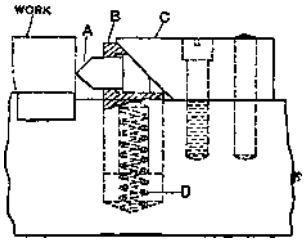
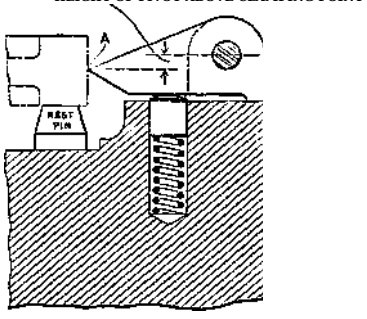
a down-and-in movement by means of a 45-degree taper on stud *D.* The stud *D* is milled off at *F* to give the clamp sufficient movement to remove the work. A mechanism for drawing down both ends of two pieces, by means of a single nut, is illustrated in Fig. 9. Each piece is clamped independently, thus making it suitable for use on rough castings or forgings. Rod *A,* running through the fixture, carries ball-and-socket washers at each end and draws the end clamps *B* and *C* together. These clamps are given a down-and-in movement against the 45-degree wedge ends of rods *D* and *E.* The clamping thrust against rods *D* and *E* imparts a downward movement to the inner clamps *G* and *H,*




*Machinery*

**Fig. 4. Simple means for Drawing the Work down Firmly onto the Locating Pins**

**Fig. 5. Another Example of Clamps Drawing the Work down Firmly onto the Locating Pins**

pulling the work down on the inner rest-pins. The clamps are returned by means of plungers *K* and spring J,

The fixture illustrated in Fig. 10 shows a method of drawing down two clamps and throwing the work against the stop-pin by a single clamping operation. Tightening nut *A* clamps down clamp *C* and pulls up rod *B* against the 45-degree tapered end of rod *D,* giving a lateral movement against plunger *E.* Plunger *E* is carried by the floating stud *G.* On the upper end of stud G is a i5-degree taper that operates against plunger *H.* Plunger *E* imparts, first, an upward movement to floating stud *G,* which,